



## DETAILED SPECIFICATIONS FOR ERICO'S COAXIAL SURGE PROTECTORS CSP

### Applications

Lightning transients and surges are a major cause of expensive electronic equipment failure and business disruption. Damage may result in the loss of computers, data and communications equipment as well as the loss of revenue and profits. ERICO's Coaxial Surge Protector (CSP) family of surge diverters, offer economical and reliable protection from transients on coaxial antenna RF feeders cables.

They are specifically designed to protect wireless communications equipment from lightning discharges, NEMP and other induced electromagnetic disturbances on coaxial antenna feeders.

The device comprises a leadless gas arrestor housed in a chrome plated brass block. Careful design and precision machining has allowed the match between the characteristic impedance of the unit and the cable to be optimized. This attention to detail has resulted in a unit capable of operating at typical power and frequency levels of 300W and 2GHz respectively, whilst minimising the insertion and return losses.

Versions with N, BNC or N bulkhead connectors are available. Units are also equipped with tapped mounting holes, facilitating easy attachment of mounting brackets and grounding leads.

### Features

- Robust design
- Simple plug-in installation
- Models to suit N and BNC cable terminations
- High impulse rating
- Wide operating frequency spectrum
- Low insertion and return loss
- Tapped mounting holes

# COAXIAL SURGE PROTECTOR CSP

## SPECIFICATIONS

Operation:	
Maximum Impulse Discharge Current 8/20 $\mu$ s	20kA
Max. AC Discharge Current (50Hz, 9 cycles)	100A
Impulse Life (10/1000 $\mu$ s 500A)	400 times
Characteristic Impedance	50 ohms
Operating frequency	DC - 3GHz typ.
Maximum Capacitance	1.5pF
Insulation Resistance	>10Gohms

Physicals:	
Environmental rating	IP20
Operating conditions	0-65°C, 0-90% humidity
Dimensions (W x H x L)	NMF 29 x 29 x 62mm
	BNC 29 x 29 x 57mm
	NB 29 x 29 x 67mm

Weight	30g (approx.)
Warranty	5 years

## ORDERING INFORMATION

CSP XXX VVV:

XXX = connector type and termination

VVV = nominal breakdown voltage

To select the appropriate protection voltage use the following procedure:

1. Determine the transmitter power in Watts (P)
2. Determine the antenna VSWR (voltage standing wave ratio), if unsure use 1.5 as a worst case scenario.
3. Calculate V<sub>peak</sub> using the following formula:  $V_{peak} = VSWR \times 1.4 \times \sqrt{(50P)}$
4. Choose the CSP with next DC clamp voltage rating above the calculated V<sub>peak</sub>

Part Number	Connector Type	DC Clamp	Impulse
		Voltage (100V/s)	Clamp max. (100V/us)
CSP-NMF-90	N-Type M to F	72-108V	450V
CSP-NMF-600	N-Type M to F	480-720V	1100V
CSP-BNC-90	BNC-Type M to F	72-108V	450V
CSP-BNC-600	BNC-Type M to F	480-720V	1100V
CSP-NB-90	Bulkhead N-Type F to F	72-108V	450V
CSP-NB-600	Bulkhead N-Type F to F	480-720V	1100V

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